

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

WORLDS INC.,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 19-1773 (MN)
)	
LINDEN RESEARCH, INC. d/b/a LINDEN)	
LAB,)	
)	
Defendant.)	

MEMORANDUM ORDER

At Wilmington this 23rd day of November 2020:

IT IS HEREBY ORDERED that the claim terms of U.S. Patent No. 7,181,690 (“the ’690 Patent”) with agreed-upon constructions are construed as follows (*see* D.I. 52-1 at 1; D.I. 54-1 at 1):

1. “determining, from the received positions, a set of the other users’ avatars that are to be displayed” and “determining from the positions transmitted in step (c), by each client process, a set of the avatars that are to be displayed” shall have their plain and ordinary meaning (claims 1, 6); and
2. “transmitting . . . the positions of less than all of the avatars that are not associated with the client process” shall have its plain and ordinary meaning (claim 6).

Further, as announced at the hearing on November 13, 2020, IT IS HEREBY ORDERED that the disputed claim terms of the ’690 Patent are construed as follows:

1. “avatar(s)” means “a graphical representation of a user” (claims 1, 4, 6, 8)
2. “client process” means “a program executed on a user’s computer to provide access to a server” (claims 1, 4, 6, 8)¹

¹ During the hearing, the parties agreed to the constructions for “client process” and “server process” as set forth herein. The Court adopts those constructions.

3. “server process” means “a program executed by one or more computers that provide one or more services to users of computers across a network” (claims 1, 6, 8)
4. “receiving a position of less than all of the other users’ avatars” shall have its plain and ordinary meaning (claim 1)
5. “determining from the received positions an actual number of the other users’ avatars” shall have its plain and ordinary meaning (claims 4, 8)²
6. determining an actual number of avatars that are not associated with the client process based on the positions transmitted by the server process” shall have its plain and ordinary meaning (claims 4, 8)
7. “comparing the actual number to the maximum number to determine which of the [other users’] avatars are to be displayed” shall have its plain and ordinary meaning(claims 4, 8)

The parties briefed the issues, (*see* D.I. 46), and filed an appendix containing both intrinsic and extrinsic evidence, including an expert declaration of Craig S. Rosenberg, Ph.D., submitted by Defendant, (*see* D.I. 47, 48).³ Plaintiff also provided a tutorial describing the relevant technology. (*See* D.I. 45). The Court carefully reviewed all submissions in connection with the parties’ contentions regarding the disputed claim terms, heard oral argument, (*see* D.I. 55), and applied the following legal standards in reaching its decision:

² As noted at the hearing, the Court determined that Defendant had not met its burden to show that the 5th, 6th and 7th terms are indefinite. Based on the record before it, however, the Court could not conclude that the terms are definite. Therefore, the Court will give those terms their plain and ordinary meaning. Should a disagreement as to these terms remain after full fact and expert discovery, the Court will allow Defendant to raise definiteness again.

³ Dr. Rosenberg holds a Bachelor of Science in Industrial Engineering, a Master of Science in Human Factors, and a Ph.D. in Human Factors from the University of Washington School of Engineering and has thirty (30) years of experience in the areas of human factors, user interface design, software development, software architecture, systems engineering, and modeling and simulation. (*See* D.I. 48, Ex. N ¶ 3).

I. LEGAL STANDARD

A. Claim Construction

“[T]he ultimate question of the proper construction of the patent [is] a question of law,” although subsidiary fact-finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015). “[T]he words of a claim are generally given their ordinary and customary meaning [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (internal citations and quotation marks omitted). Although “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. *Id.* at 1314. “[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted).

The patent specification “is always highly relevant to the claim construction analysis . . . [as] it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. “Even when the specification describes only a single embodiment, [however,] the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (internal quotation marks omitted) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is “intrinsic evidence, . . . consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In some cases, courts “will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva*, 135 S. Ct. at 841. Extrinsic evidence “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. Expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Phillips*, 415 F.3d at 1318. Nonetheless, courts must not lose sight of the fact that “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.* Overall, although extrinsic evidence “may be useful to the court,” it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope

of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

B. Indefiniteness

Section 112 of the Patent Act requires a patent applicant to “particularly point out and distinctly claim the subject matter” regarded as the applicant’s invention. 35 U.S.C. § 112 ¶ 2. “The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, *e.g.* competitors of the patent owner, can determine whether or not they infringe.” *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779-80 (Fed. Cir. 2002) (citing *Warner-Jenkinson Co. v. Hilton-Davis Chem. Co.*, 520 U.S. 17, 28-29 (1997)). Put another way, “[a] patent holder should know what he owns, and the public should know what he does not.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 731 (2002).

A patent claim is indefinite if, “viewed in light of the specification and prosecution history, [it fails to] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). A claim may be indefinite if the patent does not convey with reasonable certainty how to measure a claimed feature. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). But “[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique.” *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015).

Like claim construction, definiteness is a question of law, but the Court must sometimes render factual findings based on extrinsic evidence to resolve the ultimate issue of definiteness. *See, e.g., Sonix Tech. Co. v. Publications Int’l, Ltd.*, 844 F.3d 1370, 1376 (Fed. Cir. 2017); *see also Teva*, 135 S. Ct. at 842-43. “Any fact critical to a holding on indefiniteness . . . must be proven by the challenger by clear and convincing evidence.” *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).

II. THE COURT’S RULING

The Court’s rulings regarding the disputed claim terms of the ’690 Patent were announced from the bench at the conclusion of the hearing as follows:

. . . I am prepared to rule on each of the disputes. I will not be issuing a written opinion, but I will issue an order stating my rulings. I want to emphasize before I announce my decisions that, although I am not issuing a written opinion, we have followed a full and thorough process before making the decisions I am about to state. I have reviewed the patent in dispute. I have also reviewed the portions of the prosecution history, the District of Massachusetts decision, the final written decision of the PTAB, the invalidity contentions, the dictionary definitions, and the expert declaration of Dr. Craig Rosenberg submitted by Defendant, all of which were included in the joint appendix. There was full briefing on each of the disputed terms. There was also a tutorial on the technology submitted by Plaintiff. And there has been argument here today. All of that has been carefully considered.

As an initial matter, I am not going to read into the record my understanding of claim construction law and definiteness generally. I have a legal standard section that I have included in earlier opinions, including somewhat recently in *Quest Diagnostics Investments LLC v. Laboratory Corporation of America Holdings*, C.A. No. 18-1436. I incorporate that law and adopt it into my ruling today and will also set it out in the order that I issue.

Plaintiff has suggested that a person of ordinary skill in the art “would have had the equivalent, through education or practical experience, of a bachelor’s degree in computer science or a related

field, and at least two years of experience developing, programming/encoding, or implementing networked virtual environments.”^[4] Defendant has suggested a substantially similar definition, with the caveat that “additional education or experience may serve as a substitute for these requirements.”^[5]

Neither party has asserted that the differences are relevant to claim construction. And Defendant has stated that it does not dispute Plaintiff’s definition for claim construction purposes. And thus, I will adopt Plaintiff’s proposed definition for this ruling.

Now the disputed terms:

The first term is “avatar” in claims 1, 4, 6 and 8. Plaintiff asserts that the term should be construed to mean “a graphical representation of a user in three-dimensional form.” Defendant argues that the term should be construed as “a graphical representation of a user.”

The dispute centers on whether the avatar must be three-dimensional. Here, I agree with Defendant and will construe the term to mean “a graphical representation of a user,” without the additional limitation that it must be three-dimensional. That is consistent with the ordinary meaning of avatar that the parties agree on.

That construction is also supported by the intrinsic evidence. The claims state that each user or each client process has an avatar associated with it and that each avatar may change position. Nothing in the claim language requires the avatar to be three-dimensional. There is nothing that relates to any three-dimensional characteristic of avatars, nor is there any indication that the performance of steps in the claims is dependent on the avatars having three dimensions.

The specification does not define “avatar.” Plaintiff, however, points to a number of places in the specification to support its construction. First, Plaintiff points to the Abstract and Summary of Invention which both read: “The present invention provides a highly scalable architecture for a three-dimensional graphical,

⁴ (D.I. 46 at 7).

⁵ (*Id.*)

multi-user, interactive virtual world system.”^[6] And although those statements reference “the present invention,” they do not specify that the avatars themselves should be of any particular number of dimensions. About the avatars, the Summary of Invention simply says that “[t]he virtual world shows avatars representing the other users who are neighbors of the user viewing the virtual world.”^[7]

The specification describes an avatar as being “a three-dimensional figure chosen by a user to represent the user in the virtual world”^[8] only in the Description of the Preferred Embodiment. That section itself states that it is “illustrative and not descriptive” and that “[t]he scope of the invention should, therefore, be determined not with reference to the above description, but instead should be determined with reference to the appended claims along with their full scope of equivalents.”^[9]

In short, the portions of the specification referring to three-dimensional avatars are citations to preferred embodiments. The Federal Circuit has cautioned against reading limitations from embodiments in the specification into the claims in cases such as *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) and *Superguide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). I will heed that caution.

Additionally, the continuation applications related to the patent-in-suit support the Court’s construction. In the ’501 Patent^[10] and the ’998 Patent,^[11] the patentees expressly claimed a “three-dimensional avatar.” In the ’998 Patent, the patentees claimed both “avatar” and “three-dimensional avatar”^[12] suggesting that the two terms refer to different things.

⁶ (Abstract; col. 2 ll. 24-26).

⁷ (Col. 2 ll. 30-32).

⁸ (Col. 3 ll. 12-17; Col. 6 ll. 9-11).

⁹ (Col. 16 ll. 16:9-16).

¹⁰ U.S. Patent No. 8,082,501 B2.

¹¹ U.S. Patent No. 8,145,998 B2.

¹² Compare ’998 Patent col. 19 ll. 12-30 (claim 1) with ’998 Patent col. 19 ll. 31-56 (claim 2).

In circumstances such as this, terms should be interpreted consistently across patents.^[13] Adopting Plaintiff’s proposed construction of “avatar” would render the term “three-dimensional avatar” in the continuation patents meaningless and would violate the principle that “[d]ifferent claim terms are presumed to have different meanings.”^[14]

Moreover, the fact that the patentees later specified “three-dimensional avatar” shows that the patentees could have done so during prosecution of the patent-in-suit, but chose not to.

The extrinsic evidence is also consistent with this construction. As I noted in referring to the agreed-upon ordinary meaning at the time of the invention, contemporary technical dictionaries define “avatar” as “a graphical representation of a user”^[15] and “an image that represents an individual’s cyber presence.”^[16] Neither of these definitions requires that an avatar be three-dimensional.

Finally, I understand that the District of Massachusetts previously construed the term differently. I have reviewed that decision, and the final written decision of the PTAB, which the Massachusetts court did not have. I find the reasoning of the PTAB more persuasive.^[17]

Thus, I decline to read in Plaintiff’s proposed requirement that the avatar be three-dimensional and will instead construe the term to mean “a graphical representation of a user.”

The second term is “client process” in claims 1, 4, 6 and 8. During the argument today, the parties agreed to the construction “a program executed on a user’s computer to provide access to a server.” I will adopt that construction.

¹³ See *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005).

¹⁴ *Bd. of Regents of the Univ. of Texas Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008).

¹⁵ (D.I. 48, Ex. I. at ECF page (“pg.”) 8 of 106).

¹⁶ (D.I. 48, Ex. J at pg. 12 of 106).

¹⁷ (D.I. 47, Ex. H at 51).

The third term is “server process” in claims 1, 6 and 8. During the argument today, the parties also agreed to the construction “a program executed by one or more computers that provide one or more services to users of computers across a network.” I will also adopt that construction.

The fourth term is “receiving a position of less than all of the other users’ avatars” in claim 1. Plaintiff contends this term should be given its plain and ordinary meaning. Defendant argues that the term should be construed as “receiving position data for up to a set of maximum number N of the other users’ avatars nearest to the user’s avatar, which is less than the total number of other users’ avatars.”

There are two areas of dispute. One, whether there is a predetermined number N which sets the maximum number of avatars the server will send to the user. And two, whether the subset of the avatars sent to the user must be those nearest the user. As to both, I agree with Plaintiff and will construe the term to have its plain and ordinary meaning.

As to a maximum number of avatars, the claim itself does not reference a predetermined maximum number of avatars. Claim 1 states only that the client process receives “a position of less than all of the other users’ avatars.” Although the specification discusses a preferred embodiment in which the server “maintains a variable, N, which sets the maximum number of other avatars,”^[18] the language of the claim is broader. If the patentees had intended to import this limitation into claim 1, they could have done so. Plaintiff points to claim 4 as an example of the patentees doing just that in another instance.^[19] That claim specifies that the client process “determin[es] a maximum number of the other users’ avatars to be displayed,”^[20] which shows that the patentees chose when to specify the existence of a predetermined maximum number of avatars. The fact that the patentees did not include this requirement in claim 1 counsels against importing such a limitation from the specification.

As to the position of avatars, the claims again do not specify that the server process sends the positions of those avatars nearest to

¹⁸ (Col. 5 ll.35-36).

¹⁹ (D.I. 46 at 32).

²⁰ (Col. 19 ll.57-58).

the user. Rather, they simply state that it is a subset which is “less than all of the other users’ avatars.” Defendant argues that proximity is the determining factor because the specification repeatedly states that the client will display “neighboring” avatars.^[21] The specification, however, also states that “the definition of ‘neighboring’ might be controlled by other factors besides proximity,”^[22] and lists examples such as using “video telephone objects” or filtering by user ID.

Therefore, I will construe this term to have its plain and ordinary meaning.

I am going to address the final three terms together.

The fifth term comprises two similar phrases: “determining from the received positions an actual number of the other users’ avatars” and “determining an actual number of avatars that are not associated with the client process based on the positions transmitted by the server process,” which are in claims 4 and 8, respectively.


The sixth term is “determining a maximum number of [the other users’] avatars [to / that can] be displayed” in claims 4 and 8.

The seventh term is “comparing the actual number to the maximum number to determine which of the [other users’] avatars are to be displayed” in claims 4 and 8.

For each of these, Plaintiff asserts that the term should be given its plain and ordinary meaning.

Defendant asserts that each term is indefinite.

For these terms, on the record before me, I conclude that Defendant has not met its burden to show that these terms are indefinite. That being said, I am not yet ready to conclude that they are definite. Should there still be a disagreement regarding these claim terms in the future, Defendant may raise the issue later, if appropriate, after full fact and expert discovery.


 The Honorable Maryellen Noreika
 United States District Judge

²¹ (D.I. 46 at 34-35).

²² (Col. 5 ll.55-59).